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CLAIMS

What is claimed is:

- 1           1. A method for protecting exposed joint  
2 connection portions on weight coated pipelines  
3 comprising the steps of:  
4           installing a cover material around the  
5 exposed joint connection such that the cover material  
6 overlaps the weight coating on either side of the  
7 exposed joint connection,  
8           cutting an opening into the cover material,  
9           sealing cover material together forming an  
10 annular void between the pipe and the cover material,  
11           injecting fluid joint filler system  
12 components through the opening into the annular void,  
13 and  
14           allowing the joint filler system to solidify  
15 and fill the void.

- 1           2. A method of claim 1 wherein the fluid joint  
2 filler system is a rapid setting polyurethane system.

- 1           3. A method of claim 1 wherein the cover  
2 material is a pliable sheet of synthetic resin.

- 1           4. The method of claim 3 wherein said step of  
2 installing comprises the step of:

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3 forming the resin sheet into a cylinder  
4 forming an annular pocket about the exposed joint  
5 connection.

1 5. The method of claim 4 wherein the cover  
2 material is sealed by heat welding.

1 6. The method of claim 4 wherein the cover  
2 material is a thermoplastic synthetic resin.

1 7. The method of claim 4 wherein the cover  
2 material is polyethylene.

1 8. The method of claim 4 wherein the cover  
2 material is between about 0.02 inches to about 0.5  
3 inches in thickness.

4 9. The method of claim 4 wherein the opening is  
5 precut into the cover material.

1 10. The method of claim 4 wherein the joint  
2 filler system is a rapid curing polyurethane system  
3 which reacts to form a high density open celled foam  
4 material in the annular void.

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- 1           11. A method for protecting exposed joint  
2           connection portions on weight coated pipelines  
3           comprising the steps of:  
4                 installing a synthetic resin cover material  
5           around the exposed joint connection by forming the  
6           resin sheet into a cylinder which overlaps the weight  
7           coating on either side of the exposed joint connection  
8           forming an annular pocket about the exposed joint  
9           connection,  
10                 sealing the cover material together forming a  
11           sleeve,  
12                 cutting an opening into the cover material,  
13                 injecting a mixture of unreacted polyurethane  
14           chemicals through the opening into the annular void,  
15           and  
16                 allowing the polyurethane chemicals to react  
17           and completely fill the void.

- 1           12. The method of claim 11 wherein the outside  
2           edge of the cover material is sealed to the cover  
3           material by heat welding.

- 1           13. The method of claim 11 wherein the cover  
2           material is a thermoplastic synthetic resin.

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1           14. The method of claim 11 wherein the cover  
2 material is polyethylene.

1           15. The method of claim 11 wherein the cover  
2 material is between about 0.02 inches to about 0.5  
3 inches in thickness.

4           16. The method of claim 11 wherein the opening is  
5 precut into the cover material.

1           17. An apparatus for protecting exposed pipe  
2 joints on weight coated pipelines comprising:  
3           a pliable cover material overlapping adjacent  
4 end portions of the weight coat, completely enclosing  
5 the exposed pipe joint, and sealed in place forming an  
6 annular space around the pipe;  
7           said annular space between the exposed  
8 pipeline and the cover material filled with a joint  
9 filling material.

1           18. The apparatus of claim 17 wherein the joint  
2 filling material is a high density open celled  
3 polyurethane foam, formed by reacting polyurethane  
4 chemicals inside the cover material.

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- 1 19. The apparatus of claim 17 wherein the pliable
- 2 cover material is formed from polyethylene.